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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/570,901

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Thomas Lechner

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EXAMINER

TRAN, CON P

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/570,901	Applicant(s) LECHNER, THOMAS	
	Examiner CON P. TRAN	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 7-14 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-14 and 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-3, 7-14, and 16-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wachi et al. U.S. Patent Application Publication 20010049994 (hereinafter, "Wachi") in view of Clynes U.S. Patent 5590282.

Regarding **claim 10**, Wachi teaches *an apparatus for rendering* (hardware of a musical tone synthesis system, Fig. 14; see par. [0166]) *sampled data from a music file according to a transmission characteristic of a loudspeaker* (speaker, electro-acoustic converter, see par. [0047] *of a mobile terminal of a wireless communication system* [mobile phones, see par. [0147], *the apparatus comprising:*

storage means for storing the music file (standard MIDI format, see [0068], [0182]) *and data related to transmission characteristics of one or more loudspeakers* (memory 122, 124, Fig. 14 in portable phone; see [0182]),

selection means (input device 8, Fig. 1, [0047]; 108, Fig. 14, [0166]) *for selecting data for a particular loudspeaker* (see [0047]) *from the storage means* (memory 122, 124, Fig. 14 in portable phone; see [0167], [0182]),

low frequency sound identification means (pseudo low tone synthesis 60, Fig. 3; see para. [0059]) *for identifying audio data in the music file* (standard MIDI format, see [0068], [0182]) *which represent a sound with a spectral component below a transmission frequency range of the particular loudspeaker corresponding to the selected data* (is determined in accordance with a characteristic of an electro-acoustic converter of the portable phone, see [0175]),

control means (amplitude control portion 172, Fig. 19; pseudo low tone control data, see [0152], [0278]) *for controlling a modification of a sound reproduction from the identified audio data such that the modified sound reproduction yields a sound spectrum having an increased energy content within the transmission frequency range of the particular loudspeaker as compared to a sound spectrum* (the harmonic synthesis system, see [0158], [0283]) *of an unmodified sound reproduction* (see 0219, 0220)); and

synthesizing means (pseudo low tone synthesis portion 60, Fig. 3) *for synthesizing sampled data from a modified music file* (see [0059]),

wherein the control means (amplitude control portion 172, Fig. 19; pseudo low tone control data, see [0152], [0278]) *matches with that lowest frequency can be thereafter automatically selected to be used by simply effecting the operation for selecting a timbre* (see [0152]); *a pseudo low tone should be reproduced in a portable phone* (see [0175]); *determining the pseudo low tone start frequency data having a cut-off frequency* (lowest or critical frequency) *in accordance with a characteristic of an*

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electroacoustic converter of the portable phone (i.e., *in accordance with transmission frequency range of the loudspeaker*, par [0175], see Wachi).

However, Wachi does not explicitly disclose wherein the music file is a music score file, and wherein the control means modifies the music file to provide the modified music file by replacing a specification of an instrument provided in the music file for the identified audio data with a substitute specification of an instrument having brighter timbre.

Clynes discloses a music information highway in which a plurality of subscribers are linked by a network to a central computer station in whose memory is stored a library of music scores (see col. 1, lines 8-12) in which the music file is the music score file (see Clynes, Fig. 1, col. 4, lines 53-61); changes in the duration of the tones, vibrato, timbre and other deviations (col. 2, lines 31-43); the central system is that the very best and longest sound samples of many instruments can be used centrally to shape the tones of the music, each musical instrument individually controlled and shaped (i.e., different timbre, col. 7, lines 1-15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to try to have incorporated the music information highway taught by Clynes with the apparatus for rendering sampled data from a music file of Wachi to obtain wherein the music file is a music score file, and wherein the control means modifies the music score file to provide the modified music file as claimed since there is a finite number of identified, predictable potential solutions (i.e. brighter timbre, darker timbre) to the recognized need (i.e., different instrument) and one of ordinary skill in the

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art could have pursued the known potential solutions with a reasonable expectation of success. The motivation is for purpose of rendering the music scores meaningful and expressive as suggested by Clynes in column 4, lines 10-11.

Regarding **claim 11**, Wachi in view of Clynes teaches an apparatus according to claim 10. Wachi, as modified, further teaches wherein the control means is configured to store modified audio data representing the modified sound reproduction in a music file in the storage means of the apparatus (see Wachi [0104]).

Regarding **claim 12**, Wachi in view of Clynes teaches an apparatus according to claim 10. Wachi, as modified, further teaches wherein the control means is configured to modify the sound reproduction at a time a respective music file is replayed via the loudspeaker (see Wachi [0175]).

Regarding **claim 1**, this claim merely reflects the method to the apparatus claim of claim 10 and is therefore rejected for the same reasons.

Regarding **claim 2**, Wachi in view of Clynes teaches a method according to claim 1. Wachi, as modified, further teaches wherein the instrument of the substitute specification belongs to a same category of instruments as the instrument of the specification (i.e., that instrument, see Clynes, col. 7, lines 1-15) provided in the music file (MIDI, see Wachi [0182]).

Regarding **claim 3**, this claim merely reflects the method to the apparatus claim of claim 12 and is therefore rejected for the same reasons. It is noted Wachi in view of Clynes, as modified, teaches a frequency or a note number NN, and a cut-off frequency (lowest or critical frequency) corresponding to limitation “based on a register”, i.e., frequency range (see Wachi [0175]); see also Clynes, col. 7, lines 1-15, i.e., many instruments.

Regarding **claim 7**, Wachi in view of Clynes teaches a method according to claim 1. Wachi, as modified, further teaches wherein the modified sound reproduction is based on a modified parameter file (i.e., loudness of the sound; see Wachi [0220]).

Regarding **claim 8**, Wachi in view of Clynes teaches a method according to claim 1. Wachi, as modified, further teaches wherein the modified sound reproduction is based on a modified FM-spectra file (see Wachi [0283]).

Regarding **claim 9**, Wachi in view of Clynes teaches a method according to claim 1. Wachi, as modified, further teaches wherein a format of the music file corresponds to a MIDI data file format (see [0182]).

Regarding **claim 13**, this claim has similar limitations as Claim 10. Therefore it is interpreted and rejected for the reasons set forth in the rejection of Claim 10. It is noted

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Wachi teaches mobile phone including sound board and speaker (see [0047], [0147], [0175]).

Regarding **claim 14**, this claim merely specifies a computer-readable storage medium of claim 10 and is therefore interpreted and rejected for the same reasons.

Regarding **claim 16**, Wachi in view of Clynes teaches an apparatus according to claim 10. Wachi, as modified, further teaches wherein the control means (amplitude control portion 172, Fig. 19; pseudo low tone control data, see Wachi [0152], [0278]) modifies the music score file to provide the modified music file by transposing an entirety of the frequency data in the music score file to a higher frequency range, i.e., (a frequency (240 Hz) higher than the lowest frequency (120 Hz) by one octave is set as the pseudo low tone start frequency, see Wachi [0272]).

Regarding **claim 17**, Wachi in view of Clynes teaches an apparatus according to claim 10. Wachi in view of Clynes, as modified, further teaches wherein the instrument of the substitute specification belongs to a same category of instruments as the instrument of the specification (i.e., that instrument, see Clynes, col. 7, lines 1-15) provided in the music score file (see Clynes, Fig. 1, col. 4, lines 53-61).

Regarding **claim 18**, Wachi in view of Clynes teaches an apparatus according to claim 10. Wachi in view of Clynes, as modified, further teaches wherein the substitute

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specification is selected based on a register in which the instrument of the specification (a frequency or a note number NN, and a cut-off frequency (lowest or critical frequency) corresponding to limitation "based on a register", i.e., frequency range (see Wachi [0175]); see also Clynes, col. 7, lines 1-15, i.e., many instruments) provided in the music score file (see Clynes, Fig. 1, col. 4, lines 53-61) is to be replayed (see Wachi [0175]).

Regarding **claim 19**, this claim has similar limitations as Claims 10, 17, and 18. Therefore it is interpreted and rejected for the reasons set forth in the rejection of Claims 10, 17, and 18.

Response to Arguments

3. Applicant's arguments with respect to **claims 1-3, 7-14, and 16-19** have been considered but are moot in view of the new grounds of rejection.

4. Applicant asserts on page 7, regarding claim 10:

"In its rejection of Claim 10, the Office Action concedes that Wachi does not disclose a music score file that specifies an instrument and/or replacing an instrument specification therein with a substitute specification of an instrument having brighter timbre. See Office Action, Page 4. As such, the Office Action relies on Clynes as disclosing these recitations.

However, while Clynes may describe that a user can use a user interface to "[s]witch the instruments that play" in a music score (Clynes, Col. 5, line 60), Clynes does not disclose or suggest switching of instruments according to a

transmission frequency range of a loudspeaker of a mobile terminal.”

Examiner respectfully disagrees. As presented above in the Office Action, Wachi teaches a pseudo low tone should be reproduced in a portable phone (see [0175]); determining the pseudo low tone start frequency data having a cut-off frequency (lowest or critical frequency) in accordance with a characteristic of an electroacoustic converter of the portable phone (i.e., *in accordance with transmission frequency range of the loudspeaker*, par [0175], see Wachi).

5. Applicant asserts on page 8, regarding claim 10:

“Furthermore, the operations of Wachi are performed when receiving a sounding instruction designating the pitch (e.g., at the time of rendering). Thus, the operations for switching instruments in accordance with user preferences (e.g., at the time of user selection), as described by Clynes, would be a significant deviation from the teachings of Wachi. Accordingly, Applicant submits that the combination of Wachi and Clynes fail to disclose at least the above-highlighted recitations of Claim 1.”

Examiner respectfully disagrees since the test for obviousness it is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. As presented above in the Office Action, Wachi in view of Clynes teaches such claimed limitations.

6. Applicant further asserts on page 8, regarding claim 10:

“Thus, the "recognized need" relied upon by the Final Action is not provided by the cited art, but rather, appears to

be based on hindsight reasoning informed solely by Applicant's disclosure, which is prohibited by the MPEP.”

Examiner respectfully disagrees. As presented above in the Office Action, Wachi in view of Clynes teaches the recognized need (i.e., different instrument): “the system will easily allow even the largest symphonies and choral works to be faithfully interpreted by this means, with each musical instrument individually controlled and shaped”, see Clynes, col. 7, lines 1-15.

7. Applicant asserts on page 9, regarding claim 10:

“Third, Applicant submits that the combination of the cited references may render Clynes unsatisfactory for its intended purpose. In particular, if the teachings of Clynes and Wachi were combined “for the purpose of rendering the music scores meaningful and expressive” as argued by the Office Action, one of ordinary skill would arrive at a solution in which both the user's preferences and the characteristics of speaker are taken into account in modifying a music score. However, Applicant notes that these different approaches may be incompatible in some instances. . . In other words, if combined, the system of Wachi may defeat the stated purpose of Clynes (that is, to render the performance “expressive”), by undoing the user's personal or expressive selections when they conflict with the critical pitch of the speaker.”

Examiner respectfully disagrees since one of ordinary skill in the art needs not to have the same modification as Applicant suggestion and this is only Applicant's speculation that “the system of Wachi may defeat the stated purpose of Clynes”.

8. Applicant further asserts on page 10, regarding claim 10:

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“Thus, as the Office Action merely points to the presence of the claim elements without providing a line of reasoning as to why it would be predictable to one of ordinary skill in the art to combine the teachings of Wachi (which is concerned with generating tones based on the dynamic range of a selected sound system) with those of Clynes (which is concerned with allowing a user to create expressive music).”

Examiner respectfully disagrees. As presented above in the Office Action, it would have been obvious to one of ordinary skill in the art at the time the invention was made to try to have incorporated the music information highway taught by Clynes with the apparatus for rendering sampled data from a music file of Wachi to obtain wherein the music file is a music score file, and wherein the control means modifies the music score file to provide the modified music file as claimed since there is a finite number of identified, predictable potential solutions (i.e. brighter timbre, darker timbre) to the recognized need (i.e., different instrument) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success. The motivation is for purpose of rendering the music scores meaningful and expressive as suggested by Clynes in column 4, lines 10-11.

9. Applicant further asserts on pages 10-11, regarding claims 17-18, and 2-3:

“Furthermore, while Clynes may note that a user may switch the instruments that play (see Clynes, Col. 5, line 60), the cited portions of Clynes do not disclose or suggest that the user is required to switch to another instrument that belongs to the same instrument category or based on the register of the originally specified instrument.”

Examiner respectfully disagrees. As presented above in the Office Action, Wachi in view of Clynes teaches “that instrument”, “many instruments”, see Clynes, col. 7, lines 1-15.

Conclusion

10. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CON P. TRAN whose telephone number is (571)272-7532. The examiner can normally be reached on M - F (08:30 AM - 05:00 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor VIVIAN C. CHIN can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/CPT/
January 3, 2012

/VIVIAN CHIN/

Supervisory Patent Examiner, Art Unit 2614